NASA Weekly Update

Week of May 15 - 19, 2006

5-19-06: NASA's Space Shuttle Discovery Moves to Launch Pad: The Space Shuttle Discovery stands at its launch pad at NASA's Kennedy Space Center, FL. The shuttle arrived at 8:30 p.m. EDT Friday on top of a giant vehicle known as the crawler transporter. The crawler transporter began carrying Discovery out of Kennedy's Vehicle Assembly Building at 12:45 p.m. Friday. The crawler's maximum speed during the 4.2-mile journey was less than 1 mph. Discovery's launch to the International Space Station is targeted for July 1, with a launch window that extends until July 19. During

Space Shuttle Discovery rests on Launch Pad 39B at NASA's Kennedy Space Center after completing the 4.2-mile journey from the Vehicle Assembly Building.

the 12-day mission, Discovery's crew will test new hardware and techniques to improve shuttle safety, as well as deliver supplies and make repairs to the station. For information about the STS-121 mission and its crew, visit: http://www.nasa.gov/shuttle.

5-18-06: NASA Announces New Weather Satellite Launch Date: NASA announced the launch date for a weather satellite that will provide timely environmental information to meteorologists and the public. The Geostationary Operational Environmental Satellite-N, known as GOES-N, will launch Wednesday, May 24, from Launch Complex 37 at Cape Canaveral Air Force Station, Fla. The launch window is from 6:11 to 7:11 p.m. EDT. NASA TV will carry the launch live. GOES-N joins a system of weather satellites that graphically display the intensity, path and size of storms. Early warning about severe weather enhances the public's ability to take shelter and protect property. For more information about GOES-N, visit: http://www.nasa.gov/goes-n.

5-18-06: NASA Set to Launch Lunar Reconnaissance Orbiter in 2008: After successful completion of its mission confirmation review on Wednesday, May 17, NASA's Lunar Reconnaissance Orbiter project has been given the authority to proceed to the implementation phase. The confirmation review represents NASA's formal decision for authorizing additional work and sets the project's cost estimate. The mission was deemed to be within budget and on schedule to launch in October 2008. For information about NASA's exploration efforts and the Lunar Reconnaissance Orbiter mission, visit: http://www.nasa.gov/exploration.

5-19-06: NASA Recognizes High School Aeronautics Research Efforts: High school students shared their vision of the future of air transportation with NASA researchers working on cutting edge aviation technology. For four years, NASA has sponsored an aeronautics competition for high school students to encourage them to study science, engineering, mathematics and technology. This year, students were asked to research and submit presentations on transportation and mobility, past, present or future. All participants received a certificate from NASA, a letter encouraging them to continue their studies in science, engineering, mathematics and technology, and a copy of a recently NASA-published book, "Innovation in Flight." For information about the NASA's Aeronautics Research Mission Directorate, visit: http://aerospace.nasa.gov.

5-18-06: NASA's Exploration Systems Progress Report: NASA has chosen the RS-68 engine to power the core stage of the agency's heavy lift cargo launch vehicle intended to carry large payloads to the moon. The announcement supersedes NASA's initial decision to use a derivative of the space shuttle main engine as the core stage engine for the heavy lift launch vehicle. For information about NASA's exploration efforts, visit: http://www.nasa.gov/exploration.

5-18-06: NASA Announces 2006 Fellowship Awards: NASA has named its 2006 awardees for the NASA Administrator's Fellowship Program, an effort to ensure the strength of our nation's scientific and technical workforce. 2006 fellowship recipients:

--Manmohan D. Aggarwal, Ph.D., Alabama A&M University, Normal, Ala.
--Beth A. Brown, Ph.D., NASA Goddard Space Flight Center, Greenbelt, Md.
--Dawn M. Elliott, Ph.D., NASA Kennedy Space Center, Fla.
--Louis J. Everett, Ph.D., University of Texas, El Paso
--Dr. Julius L. Harp, North Carolina A&T State University, Greensboro, N.C.
--Carolyn E. Knowles, NASA Headquarters, Washington
--John O. Lassiter, NASA Marshall Space Flight Center, Huntsville, Ala.
--Goang S. Liaw, Ph.D., Alabama A&M University
--John V. Shebalin, Ph.D., NASA Johnson Space Center, Houston
--Malcolm K. Stanford, Ph.D., NASA Glenn Research Center, Cleveland
--Michael W. Watson, Ph.D., Fisk University, Nashville, Tenn.

For information about the 2007 competition, visit: http://www.uncfsp.org/divstNAFPinst.aspx. For information about NASA education programs, visit: http://education.nasa.gov.

5-18-06: NASA Wants Your Innovative Ideas: NASA is seeking proposals for creating and managing innovative activities, events, products, services and other education methods for increasing America's science and technological literacy. One objective of this request for entrepreneurial offers is to distribute information nationally about the agency's programs and projects. NASA's intent is to enter into partnerships that will result in the establishment of one or more non-reimbursable Space Act Agreements with organizations. For information about the response for entrepreneurial offers, visit: http://prod.nais.nasa.gov/cgi-bin/eps/synopsis.cgi?acqid=120084. For information about NASA's education programs, visit: http://education.nasa.gov.

5-18-06: NASA Announces American Geophysical Union Presentations: NASA researchers will meet with the media and present findings on Earth and space science topics at the American Geophysical Union's 2006 Joint Assembly meeting, May 23-26 at the Baltimore Convention Center, One West Pratt Street, Baltimore. For more information and related Web links, visit: http://www.nasa.gov/vision/earth/lookingatearth/2006_joint_assembly.html.

5-17-06: NASA Finalizes Crews for Upcoming Shuttle Missions: NASA has finalized crew assignments for two space shuttle missions targeted for launch in 2007 to continue assembly of the International Space Station. Astronaut John D. Olivas will join the crew of shuttle mission STS-117. Astronaut Tracy Caldwell will join the crew of shuttle mission STS-118. Olivas and Caldwell will be making their first space flights. Astronaut Richard A. Mastracchio, previously assigned to STS-117, has been reassigned to STS-118. Veteran shuttle flier and spacewalker Scott Parazynski, previously assigned to STS-118, has left that crew to prepare for assignment to another mission. With the changes, the STS-117 crew is commanded by Marine Lt. Col. Frederick W. Sturckow. The mission's pilot is Air Force Col. Lee J. Archambault and the mission specialists are James F. Reilly II, retired Army Col. Patrick G. Forrester, Steven R. Swanson and Olivas. STS-117 will deliver the second starboard truss segment to the space station with the third set of U.S. solar arrays, batteries and associated equipment. STS-118 will be commanded by Navy Cmdr. Scott J. Kelly. The pilot will be Marine Lt. Col. Charles O. Hobaugh. The mission specialists are Canadian Space Agency astronaut Dr. Dafydd R. Williams, educator astronaut Barbara R. Morgan, Mastracchio and Caldwell. STS-118 will deliver to the station the third starboard truss segment; an external stowage platform; and logistics and supplies in a SPACEHAB single cargo module. For more information on space shuttle missions and crews, visit http://www.nasa.gov/shuttle.

5-17-06: NASA's Space Shuttle Discovery Cargo Ready for Flight: The payloads that will launch aboard the next space shuttle mission, STS-121, arrived Wednesday at Launch Pad 39-B at NASA's Kennedy Space Center, Fla. Space Shuttle Discovery's cargo includes the Italian-built logistics module Leonardo, which will carry 11 large racks filled with food, clothing, spare parts and research equipment to the International Space Station. Also included in the cargo is the Oxygen Generation System, which can provide enough oxygen each day to support a six-member crew. The system will be operational before the first six-person crew arrives aboard the station in 2009. For information about the International Space Station, visit: http://www.nasa.gov/station.

5-15-06: NASA Releases Accident Report
Summary: NASA released a summary Monday of the findings about why its Demonstration of Autonomous Rendezvous Technology spacecraft did not complete its mission and collided with the intended rendezvous satellite on April 15, 2005. Because the official mishap investigation board report contains information protected by U.S. International Traffic in Arms Regulations, it will not be publicly released. Instead, NASA has prepared a summary of the report, which omits the protected information. The summary is available at: http://www.nasa.gov/dart or http://www.nasa.gov/formedia.

Weekly Status Reports

Shuttle

There was no Shuttle status report this week. Previous status reports are available on the Web at: www.nasa.gov/shuttle.

International Space Station (ISS)

In space this week, a satellite flew within a satellite. International Space Station Flight Engineer Jeff Williams "piloted" a unique spacecraft in three dimensions for the first time around the pressurized Destiny module. The demonstration tested the basics of formation flight and autonomous docking that could be useful in future multiple spacecraft formation flying. That test flight wrapped up a week of experiments, maintenance, spacewalk preparations and packing of equipment set to return to Earth aboard Space Shuttle Discovery following its next mission to the station, targeted for July. Along with Expedition 13 Commander Pavel Vinogradov, Williams oversaw activities through the 50th day of their planned 180-day mission, focusing on laboratory science experiments in the microgravity science glovebox.

That facility hosted the final sample for the Pore Formation and Mobility Investigation experiment, which uses a transparent modeling material to study how bubbles form and migrate during liquid solidification. For more about the crew's activities and station sighting opportunities, visit: http://www.nasa.gov/station.

Expendable Launch Vehicle (ELV)

Mission: Solar Terrestrial Relations Observatory (STEREO)
Launch Pad: 17-B, Cape Canaveral Air Force Station, Fla.
Launch Vehicle: Delta II
Launch Date: July 22, 2006
Launch Times: 3:11 - 3:13 p.m. and 4:19 - 4:34 p.m. EDT

Technicians are testing individual STEREO systems on both the "A" and "B" spacecraft. The flight battery for spacecraft A was installed this week. Technicians are expected to install the battery for spacecraft B next week. In addition to testing, work planned over the next few weeks includes solar array installation and integration of the high-gain communications antenna.

The build-up of the Delta II rocket at Pad 17-B is scheduled to begin on June 1 with the first stage. Pad workers will start to erect the nine solid rocket boosters on June 2. The second stage will be hoisted into position and mated to the first stage on June 20. The crew will raise the 10-foot fairing into the pad clean room on June 21. STEREO will build a three-dimensional, global picture of the sun and study the sun's influence on Earth. For more information, visit: http://www.nasa.gov/stereo. For previous status reports, visit: http://www.nasa.gov/centers/kennedy/launchingrockets/status/2006.

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